

### **REMARKS**

Reconsideration and withdrawal of the rejections set forth in the Office Action are respectfully requested in view of this amendment and the following reasons. By this amendment, claims 1, 3, 8, 12, and 13 have been amended, and claim 2 has been canceled. Accordingly, claims 1 and 3-13 are pending in this application. The cancellation of claim 2 is made without prejudice or disclaimer to the subject matter contained therein.

Claims 1, 12, and 13 have been amended to incorporate the features of canceled claim 2. Claims 3 and 8 have been amended to make proper reference to claim 1, rather than to canceled claim 2. Thus, it is respectfully submitted that the above amendments introduce no new matter within the meaning of 35 U.S.C. §132.

Entry of the Amendment is proper under 37 C.F.R. §1.116 because it (a) places the application in *prima facie* condition for allowance for the reasons discussed herein; (b) does not raise new issues requiring further search and/or consideration by the Examiner because similar subject matter was previously considered by the Examiner and thus further consideration and/or search by the Examiner is not warranted; and (c) places the application in better form for appeal, should an appeal be necessary. For at least these reasons, entry of the present Amendment is therefore respectfully requested. Accordingly, Applicants request reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

#### ***Rejections Under 35 U.S.C. §112***

Claim 13 stand rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to

comply with the written description requirement. The Office Action concludes that “[t]he claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While the specification does recite an application 14 that sends and receives packets of multimedia information (*see page 1 lines 22-28 and page 8 lines 15-17 in the specification of the instant application*), it fails to specifically recite implementing the claimed invention as a computer program code stored on a storage medium as recited in the currently amended claim.” (Office Action, section 7, lines 2-8).

With respect to this reason for rejection, Applicants respectfully submit that, even if the specification does not explicitly describe implementing the computer program code stored on a storage medium as recited in claim 13, this does not necessarily result in failing to convey the subject matter therein to one of ordinary skill in the art that the inventors, at the time the application was filed, had possession of the claimed subject matter. On the contrary, one skilled in the art would realize computer program code stored on a storage medium which implements each step recited in claim 13 on the basis of the teachings of, for example, page 5, line 5 through page 8, line 17 and Fig. 3.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §112, first paragraph, rejection of claim 13.

### ***Rejections Under 35 U.S.C. §102***

Claims 1-13 stand rejected under 35 U.S.C. §102(b) as being allegedly anticipated by

U.S. Patent No. 6,687,752 issued to Falco et al. (“Falco”).

Applicants respectfully submit that the rejections of independent claims 1, 12, and 13 must be withdrawn because the cited reference does not disclose, teach, or suggest all of the features of the claimed subject matter. “Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration.” *W.L. Gore & Assocs. V. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Further, “when evaluating the scope of a claim, every limitation in the claim must be considered. U.S.P.T.O. personnel may not dissect a claimed invention into discrete elements and then evaluate the elements in isolation. Instead, the claim as a whole must be considered.”

*U.S.P.T.O. Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility*, page 9, October 26, 2005. As the Federal Circuit stated, “[a]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.” *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Col.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)).

Falco is directed to the improvement of the quality with which multimedia data is transmitted across a network in the face of poorly implemented timestamping within Internet protocols (Col. 3, lines 1-10).

Falco teaches a two-mode operation:

- Timestamp (TS) mode, whereby the node uses RTP timestamps within incoming packets to control the playout of the packets from the node; or

- Time-of-arrival (TOA) mode, whereby the packets are played out at the same rate they arrive.

Falco teaches an operation by examining the difference between the 2 RTP Timestamps (delta-RTP) and 2 NTP timestamps (delta-NTP) contained within consecutive RTCP SR packets; the reference specifically describes, in Col. 7, lines 25-30, a threshold of < 250 milliseconds. If delta-RTP is approximately equal to delta-NTP, it deduces that timestamps must be 'correct' and stays in TS mode. TS mode is essentially what the standard RTP protocol is designed to do, and Falco's concern is whether this is correctly done or not.

As such, if RTP was implemented correctly, then Falco's approach would never leave TS mode (unless a huge threshold of 250 milliseconds was reached between successive RTCP SR packets). Under TS mode, a node will use its own 'clock' to playout incoming packets at the rate they were sent from remote end by using remote clock timestamps. However, if skew exists between local and remote clock, buffer problems will arise which is the main focus of the present subject matter but which is not in any way addressed by Falco. In the absence of any skew between clocks that generate such timestamps, such an abstracted Falco mechanism would work very well.

As a second test, Falco uses RTP timestamps to estimate one-way delay, and if this delay suddenly increases, it presumes timestamps are 'incorrect' and 'no longer valid' (Col. 7, lines 65-66 ; Col. 8, lines 1-2). And this may, if happens repeatedly, cause a change from TS to TOA mode. TOA mode is very inaccurate, as the underlying network will introduce all sorts of jitter and Falco accepts this (Col. 6, lines 65-70).

Two points should be noted at this stage:

- a threshold of 250 milliseconds between delta-RTP and delta-NTP, derived from successive RTCP SR packets (Col. 3, lines 15-22), is orders of magnitude higher than a variation a mechanism for resolving skew will look at; and
- Falco does not teach how timestamping is actually done. For example, Falco teaches timestamping packets when they arrive with some clock but fails to identify what clock. In reality, separate system and media card clocks very often exist. In some systems, it can be very difficult to use a media card clock for timestamping purposes and so it should not be assumed that Falco implicitly or inherently teaches a media card clock. Thus, using a media card clock as claimed subject matter is neither explicitly nor implicitly disclosed in Falco.

Moreover, while Applicants appreciate that Falco uses RTCP SR, in that it looks at delta-RTP and delta-NTP of different consecutive (Col. 3, lines 15-20 and Fig. 5) RTCP SR packets, the reference does not examine the *rate* at which these values differ over several packets, which is a distinguishable feature of the present subject matter, but simply concludes that, if a threshold is exceeded for 2 consecutive packets, timestamps must be 'incorrect' and 'no longer valid.'

This can further be evidenced by the fact that Falco does not mention a buffer overflow problem which results from mismatching rates due to clock skew and which the present application attempts to address. Falco's preferred TS mode will not detect or address skew-related buffer problems, if skew exists.

As such, Applicants respectfully submit that Falco simply attempts to make a binary decision on whether or not the timestamping mechanism has broken down. In other words, Falco

suggests that, if delta-NTP and delta-RTP are very different, then there is some mix up or breakdown in the timestamping, they are derived from same place (Col. 2, lines 20-27) and Falco will revert to what it sees as the less desirable TOA mode.

While the above arguments relate to previous claims 1, 12 and 13, Applicants have further clarified the present subject matter by incorporating the features of canceled claim 2 into claims 1, 12, and 13.

Here, it can be seen that the subject matter is concerned with using synchronised time to enable skew rates *at both ends of a session* to be resolved, in order to avoid buffer problems **at both ends** and to provide for correcting for errors in delay measurement due to skew **at both ends**.

Contrary to the assessment of the Examiner at page 4 of the Office Action, Falco does not consider this at all. In contrast, the present subject matter operates at each node not only for incoming packets but also for packets that the node is generating for sending and it is the combined information that allows for detecting precisely, relative skew rate of 2 media card clocks.

Applicants therefore respectfully submit that Falco:

- (1) is not concerned with the problem addressed in each of claims 1, 12 and 13;
- (2) does not specifically identify a *media card clock*;
- (3) does not calculate a first *relative rate* of a remote media card clock to the remote real time rate; and
- (4) does not, at the same node, calculate a second *relative rate* of a local media card clock to

the local real-time rate.

As such, in view of these reasons above, at least, it is respectfully submitted that claims 1, 12, and 13 are not anticipated by and are allowable over Falco.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §102(b) rejection of claims 1, 12, and 13. Claim 2 has been canceled without prejudice or disclaimer, thereby rendering the rejection thereof moot. Claims 3-11 depend from claim 1 and are allowable for at least this reason. Since none of the other prior art of record discloses or suggests all the features of the claimed subject matter, Applicants respectfully submit that independent claims 1, 12, and 13, and all the claims that depend therefrom, are allowable.

***Rejections Under 35 U.S.C. §103***

Claim 13 stands rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Falco in view of U.S. Patent Application Publication No. 2004/0090994 applied for by Lockridge et al. ("Lockridge").

As noted above with regard to the 35 U.S.C. §102(b) rejection, Falco fails to disclose, teach, or suggest the all of the recited features of claim 13. Also, the secondary reference, Lockridge, was cited by the Examiner in the previous Office Action of April 8, 2008. As noted in the Applicants' previous amendment of July 8, 2008, Lockridge fails to disclose, teach, or suggest the features of claim 13, which Falco also fails to teach or suggest, as noted above. For detailed reasons, the Examiner is advised to refer to the Applicants' previous amendment, page 9, line 1 through page 11, line 14.

Therefore, since none of Falco and Lockridge teaches or suggests such recited features, even if one of ordinary skill in the art happens to combine the two references, the combined references still do not disclose, teach, or suggest every feature recited in claim 13. Thus, claim 13 is not obvious over Falco and Lockridge, whether taken alone or in combination.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claim 13. Since none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed subject matter, Applicants respectfully submit that claim 13 is allowable.



**CONCLUSION**

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submit that all of the stated grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

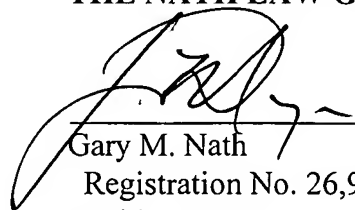
Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

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